

TWO NEW SPECIES OF *CONUS* FROM NEW CALEDONIA:

Conus boucheti sp. nov. and *Conus kanakinus* sp. nov.

(Neogastropoda: Conidae)

by Georges RICHARD

Laboratoire de Biologie marine et Malacologie
Ecole Pratique des Hautes Etudes
55, rue de Buffon — 75005 PARIS.

ABSTRACT

Two new species of *Conus*, belonging to the "group" *Endemoconus*, are described from deep waters off New Caledonia: *C. boucheti* sp. nov. and *C. kanakinus* sp. nov. Affinities with closely related species are discussed.

INTRODUCTION

Recent dredgings in deep water south of New Caledonia have yielded two undescribed species of Conidae. Dredging was carried out in 1978 and 1979 on board R.V. "VAUBAN" (Centre O.R.S.T.O.M., Noumea). I wish to express my gratitude to M. Philippe BOUCHET of the Museum National d'Histoire Naturelle, Paris, who collected the material and loaned it for study.

Both species have a concave spire and a protuberant shoulder; their elongated body-whorl and narrow aperture place them in the "group" *Endemoconus* Iredale, 1931 (type species: *Conus howelli* Iredale, 1929). This is a group of generally deep-water species, known mainly from the W. Pacific. The taxonomic meaning of *Endemoconus* is not discussed here, but is used mainly to show conchological affinities with related species.

DESCRIPTION OF THE SPECIES

Conus boucheti RICHARD, sp. nov.

* *Conus* sp. 108 ESTIVAL, 1981

Type Material

Holotype: M.N.H.N. — Paratypes: M.N.H.N. (1), A.M.S. (1), N.S.M., Tokyo (1), A.I.M. (1).

Type Locality

R.V. VAUBAN: 22° 50'S, 167° 15'E, -400 m ("Pointe Sud du Grand Recif", S.W. of Ile des Pins).

Material Examined

Beside the type material, 10 additional shells have been trawled. All come from an area within 5 miles of the type locality, at depths between 300 and 430 m.

Holotype

The shell is solid, biconical, consisting of ca. 9 whorls with a shallow suture. The multispiral protoconch is smooth, horny in colour, and has 2.5 whorls, the apex being broken. There are 6.2 teleoconch whorls with a sharp shoulder which is high on the whorl. On the spire, the main sculpture consists of numerous, closely set, strong incremental lines and there are faint obsolete spiral threads. The part of the whorls situated above the shoulder is flat or slightly concave. The body whorl is conical with mainly spiral sculpture: there are four punctuated spiral lines closely set just below the shoulder; the others (22 in all) are more distantly spaced, the basal ones being broader. The columellar zone makes no angle with the inner lip. The outer lip is thin, sharp, with a rather deep posterior notch.

The ground colour is dirty white, with a few irregular brown blotches on the spire. The body-whorl has 8 basal brown spiral bands that occupy the spaces between the spiral grooves. The periostracum is thin, transparent.

The holotype has the following dimensions: height: 17.5 mm — breadth: 9 mm — height of the aperture: 14.5 mm — breadth of the aperture: 1.5 mm.

Paratypes

M.N.H.N. = 23 x 12 mm — A.M.S. = 24 x 13 mm — N.S.M. TOKYO = 26 x 12.5 mm — A.I.M. = 18 x 9 mm.

In the 23 mm high paratype, the ground colour varies from light beige to light violet and there are additional brown blotches on the body-whorl.

The largest specimen is 39 mm high. It is an old, encrusted shell but still shows the colour pattern: the additional brown blotches on the body-whorl are numerous, and this is probably a character linked with age.

Conus boucheti is named after my colleague Philippe Bouchet who provided the material for study and has been of great help in tracing 19th century collections and making many longlost Conidae types available again.

Comparison With Other Species

The new species is related to *Conus sculletti* Marsh, 1962, *Conus nadaensis* Azuma and Toki, 1970, *Conus otohimeae* Kuroda and Ito, 1961, and *Conus kimioi* (Habe, 1965), all belonging to the same "group" *Endemoconus* Iredale.

Conus boucheti is the only species with spiral grooves on the whole body-whorl and is unique in its colour pattern of brown basal spiral bands on a lighter body-whorl.

Conus sculletti is almost smooth and polished; it has a paucispiral larval shell while it is multispiral in *Conus boucheti*. The slightly flared shoulder is also a diagnostic character of this S.E. Australian species.

Conus otohimeae is almost smooth and polished. It has a crenulated shoulder, while the shoulder is even in *Conus boucheti*, and the incremental lines are weak. The protoconch is as in *Conus boucheti*.

Conus nadaensis is smooth; its colour pattern consists of a pattern of brown and white flammules on the spire, and a white and pink median band on the body-whorl. No material was available for examination of protoconch characters.

Conus kimioi has a light, smooth shell with the exception of 3 to 5 punctuated spiral grooves just below the shoulder. The colour pattern is of the brick-wall type. No material was available for protoconch examination, but judging from published figures, a multispiral type seems to occur.

The last 3 species are presently known only from Japan and S.E. Asia.

Conus kanakinus RICHARD, sp. nov.

Type Material

Holotype: M.N.H.N. — Paratypes: M.N.H.N. (1), A.M.S. (1), N.S.M., Tokyo (1), A.I.M. (1).

Type Locality

R.V. VAUBAN: 22° 49'S, 167° 12'E, -390 -395 m (S.W. of Ile des Pins). This was the type locality of *Lyria kuniene* Bouchet, 1979 and of *Peretrochus caledonicus* Bouchet and Metivier, 1982.

Material Examined

Conus kanakinus is only known from the type material. Two of the paratypes (A.M.S., A.I.M.) originated from a haul different than the holotype: 22° 46 S — 167° 12 E, -390 -400 m.

Holotype

The shell is solid, consisting of 7 whorls with a dominant colour of narrow brown spiral bands.

The paucispiral protoconch is white, tholoid and consists of 1.3 smooth whorls, not distinctly set off from the teleoconch. There are a little less than 6 teleoconch whorls, of which the gently shouldered body whorl occupies 8/10 of shell height. The spire whorls are almost flat, separated by a very shallow suture; the spire is slightly convex with exception of the mucronate earlier whorls. The first teleoconch whorl is sculptured by strong short axial knobs, 14 in number; they are still present on the following whorl but become smoother and more spaced. With the exception of these 2 earlier teleoconch whorls, the sculpture is mainly spiral, consisting of 6 discrete finely incised grooves on the subsutural zone; the part of the body-whorl situated below the shoulder is smooth except for ca. 7 basal spiral raised cords. The axial sculpture consists only in fine incremental lines. The aperture is narrow, with the outer lip parallel to the straight columellar zone.

The ground colour is white with light brown blotches on the spire and narrow brown spiral bands below the shoulder of the body whorl. There are 13 such bands which are broader near the base; they are not totally continuous but are interrupted here and there by spaces of various lengths.

The holotype has the following dimensions: height: 15.2 mm — breadth: 7.5 mm — height of the aperture: 12.7 mm — breadth of the aperture: 1.4 mm.

Paratypes

M.N.H.N. = 17 x 9 mm — A.M.S. = 13.3 x 8 mm — N.S.M. TOKYO = 14.5 x 8 mm — A.I.M. = 11 x 6.6 mm.

The holotype is only a subadult specimen but has a perfect protoconch. The paratype 1 (M.N.H.N.) appears to be adult and reaches 17 mm; its protoconch is slightly eroded and the teleoconch bears two small holes.

Conus kanakinus is named after the native people of New Caledonia.

Comparison With Other Species

Conus kanakinus is related to *Conus caillaudi* Kiener, 1845, *Conus hirasei* (Kira, 1956), *Conus nielsenae* Marsh, 1962, *Conus scalptus* Reeve, 1843 and *Conus typhon* Kilburn, 1975.

All of them have in common a colour pattern of brown spiral lines.

Conus hirasei has a multispiral protoconch, while it is paucispiral in *Conus kanakinus*, and reaches adult size around 70-80 mm. It is known only from Japan.

Conus nielsenae has a sharp shoulder and more numerous brown spiral lines. It is known from the Australian region.

Conus typhon differs by the same characters as *Conus nielsenae*; it is a S.W. Indian ocean species. Both *typhon* and *nielsenae* reach 50-60 mm.

Conus caillaudi is a poorly known species, but all known shells have a crenulated shoulder. They originate from the Indian Ocean and reach 50 mm.

Conus scalptus can be compared only because of its similar colour pattern of brown spiral lines, but differs by its globose shape and broad aperture. It is not part of the *Endemoconus* group.

M.N.H.N. = Museum National d'Histoire Naturelle, PARIS.

A.M.S. = Australian Museum, SYDNEY.

N.S.M. = National Science Museum, TOKYO.

A.I.M. = AUCKLAND Institute and Museum.

LITERATURE CITED

AZUMA, M. and R. TOKI, 1970 — Description of a new Cone shell from Kii peninsula, Honshu. *Venus*, 29, 3: 77-80.

BOUCHET, P. and B. METIVIER. 1982. Living Pleurotomariidae (Mollusca: Gastropoda) from the South Pacific. *N.Z.J: Zool.* 9: 309-318.

ESTIVAL, J. C., 1981 — Cones de Nouvelle-Caledonie et du Vanuatu. Societe Nouvelle des Editions du Pacifique, PAPEETE, 126 p.

HABE, T., 1965 — Two new Cones from Japan. *Venus*, 24, 1: 46-49, pl. 4, figs 1-2.

IREDALE, T., 1931 — Australian Molluscan Notes, No 1. Records of the Australian Museum, 18: 225.

KIENER, L. C., 1845 — Species general et iconographie des coquilles vivantes. 2 (*Conus*): 285, pl. 55, fig 5.

KILBURN, R. N., 1975 — Description of a new *Conus* (Mollusca: Gastropoda: Conidae) from South-Eastern Africa. *Durban Museum Novitates*, X, 15: 213-216.

KIRA, T., 1956 — New species of the Conidae (Gastropoda) from Japan. *Venus*, 19, 3-5.

KURODA, T. and K. ITO. 1961 — Molluscan Shells from Southern Kii. *Venus*, 21, 3: 250-251; 260-261.

MARSH. J. A., 1962 — Two new Cone shells (Mollusca, Conidae) from Queensland. (*J. Malac. Soc. Aust.* 1(6): 40-42.

REEVE, L. A., 1843 — *Conchologia Iconica* or illustrations of the shell of Molluscous animals. 1 (Conidae).



Figures 1-4: *Conus boucheti*
1-2: Holotype;
3-4: Paratype 1 (MNHN).



Figures 5-9: *Conus kanakinus*
5-6: Holotype.
7-9: Paratype 1 (MNHN).